Prescriptive Residential Alterations That Do Not Require HERS Field Verification

CEC-CF1R-ALT-05-E (Revised 01/19)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	CF1R-ALT-05-E
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Project Name:	Date Prepared:

This compliance document is only applicable to simple alterations that do not require HERS verification for compliance. When HERS verification is required, a CF1R-ALT-01 shall first be registered with a HERS Provider Data Registry.

Alterations to Space Conditioning Systems that are exempt from HERS verification requirements may use the CF1R-ALT-05 and CF2R- ALT-05 Compliance Documents. Possible exemptions from duct leakage testing include: less than 40 ft of ducts were added or replaced; or the existing duct system was insulated with asbestos; or the existing duct system was previously tested and passed by a HERS Rater. If space conditioning systems are altered and are not exempt from HERS verification, then a CF1R-ALT-02 must be completed and registered with a HERS Provider Data Registry.

If more than one person has responsibility for installation of the items on this certificate, each person shall prepare and sign a certificate applicable to the portion of construction for which they are responsible. Alternatively, the person with chief responsibility for construction shall prepare and sign this certificate for the entire construction. All applicable Mandatory Measures shall be met. Temporary labels shall not be removed before verification by the building inspector.

A. General Information

01	Project Location:		02	Building Front Orientation (deg or cardinal):	
03	CA City:		04	Number of Altered Dwelling Units:	
05	Zip Code:		06	Fuel Type:	
07	Climate Zone:		08	Total Conditioned Floor Area (ft^2):	
09	Building Type:		10	Slab Area (ft^2):	
11	Project Scope:				

D. Fenestration/Glazing Allowed Areas and Efficiencies (Section 150.2(b)1)

01	02	03	04		05		06		07
Alteration Type	Maximum Allowed Fenestration Area For All Orientations (ft^2)	Maximum Allowed West-Facing Fenestration Area Only (ft^2)	Existing Fenestration Area for All Orientations (ft^2)	Existing West-Facing Fenestration Area (ft^2)	Maximum Allowed U-factor (Windows)	Maximum Allowed U-factor (Skylights)	Maximum Allowed SHGC (Windows)	Maximum Allowed SHGC (Skylights)	Comments

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E. Fenestration Proposed Areas and Efficiencies – Add (Section 150.2(b)1A)

Note: Doors with greater than or equal to 25 percent glazed area are considered glazed doors and are treated as fenestration products.

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Tag/ID	Fenestration Type	Frame Type	Dynamic Glazing	Orientation N, S, W, E	Number of Panes	Proposed Fenestration Area ft^2	Proposed West Facing Fenestration Area ft^2	Proposed U-factor	Proposed U-factor Source	Proposed SHGC	Proposed SHGC Source	Exterior Shading Device	Combined SHGC from CF1R-ENV-03

15	Total Proposed Fenestration Area		
16	Maximum Allowed Fenestration Area		
17	Compliance Statement	Existing + Proposed Fenestration Area ≤ Maximum Allowed Fenestration Area	☐ Yes ☐ No
18	Total Proposed West-Facing Fenestration Area		
19	Maximum Allowed West-Facing Fenestration Area		
20	Compliance Statement	Existing + Proposed West-Facing Fenestration Area ≤ Maximum Allowed West-Facing Fenestration Area	☐ Yes ☐ No
21	Proposed Fenestration U-factor (Windows)		
22	Required Fenestration U-factor (Windows)		
23	Compliance Statement	Proposed Fenestration U-factor ≤ Required Fenestration U-factor	☐ Yes ☐ No
24	Proposed Fenestration SHGC (Windows)		
25	Required Fenestration SHGC (Windows)		
26	Compliance Statement	Proposed Fenestration SHGC ≤ Required Fenestration SHGC	☐ Yes ☐ No
27	Proposed Fenestration U-factor (Skylights)		
28	Required Fenestration U-factor (Skylights)		
29	Compliance Statement	Proposed Fenestration U-factor ≤ Required Fenestration U-factor	☐ Yes ☐ No
30	Proposed Fenestration SHGC (Skylights)		
31	Required Fenestration SHGC (Skylights)		
32	Compliance Statement	Proposed Fenestration SHGC ≤ Required Fenestration SHGC	☐ Yes ☐ No

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Project Name:	Date Prepared:

F. Fenestration/Glazing Proposed Areas and Efficiencies – Replace (Section 150.2(b)1B)

Note: Doors with greater than or equal to 25 percent glazed area are considered glazed doors and are treated as fenestration products.

01	02	03	04	05	06	07	08	9	10	11	12	13	14
Tag/ ID	Fenestration Type	Frame Type	Dynamic Glazing	Orientation N, S, W, E	Area Removed (ft^2)	Area Added (ft^2)	Net Added Area (ft^2)	Proposed U-factor	Proposed U-factor Source	Proposed SHGC	Proposed SHGC Source	Exterior Shading Device	Combined SHGC from CF1R-ENV-03

15	Net Added West-facing Fenestration Area	
16	Is Net Added Fenestration Area ≤ for west-facing fenestration?	☐ Yes ☐ No
17	Net Added Fenestration Area (all orientations)	
18	Is Net Added Fenestration Area ≤ 0 for all orientations?	☐ Yes ☐ No
19	Proposed Fenestration U-factor (Windows)	
20	Required Fenestration U-factor (Windows)	
21	Is the proposed Fenestration U-factor ≤ the Required Fenestration U-factor?	☐ Yes ☐ No
22	Proposed Fenestration SHGC (Windows)	
23	Required Fenestration SHGC (Windows)	
24	Is the Proposed Fenestration SHGC ≤ the Required Fenestration SHGC?	☐ Yes ☐ No
25	Proposed Fenestration U-factor (Skylights)	
26	Required Fenestration U-factor (Skylights)	
27	Is the proposed Fenestration U-factor ≤ the Required Fenestration U-factor?	☐ Yes ☐ No
28	Proposed Fenestration SHGC	
29	Required Fenestration SHGC	
30	Is the Proposed Fenestration SHGC ≤ the Required Fenestration SHGC?	☐ Yes ☐ No

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Project Name: Page 8 of 8 Date Prepared:

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Documentation Author Signature:
Company:	Signature Date:
Address:	CEA/ HERS Certification Identification (if applicable):
City/State/Zip:	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. That the energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a registered copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	Responsible Designer Signature:
Company :	Date Signed:
Address:	License:
City/State/Zip:	Phone:

For assistance or questions regarding the Energy Standards, contact the Energy Hotline at: 1-800-772-3300.

CF1R-ALT-05-E User Instructions

NOTE: If more space is needed, print a duplicate page and fill in.

Minimum requirements for prescriptive alteration compliance can be found in Building Energy Efficiency Standards Section 150.2(b)1.

Completing these forms will require that you have the Reference Appendices for the 2019 Building Energy Efficiency Standards (P400-2018-020). This document contains the Joint Appendices which are used to determine climate zone and to complete the section for opaque surfaces. When the term CF1R is used it means the CF1R-ALT-05. Worksheets are identified by their entire name and subsequently by only the worksheet number, such as ENV-02.

Instructions for sections with column numbers and row letters are given separately.

If any part of the alteration does not comply, prescriptive compliance fails, in which case the performance compliance approach must be used in an attempt to achieve compliance.

A. General Information

1. Project Name: Identifying information, such as owner's name.
2. Date Prepared: Date of document preparation.
3. Project Location: Legal street address of property or other applicable identifying information.
4. Building Front Orientation: Building front orientation expressed in degrees, where North = 0, East = 90, South = 180, and West = 270. Indicate cardinal if it is a subdivision or multi-family project built in multiple orientations. The standards (section 100.1) include the following additional details for determining orientation:
    - Cardinal covers all orientations (for buildings that will be built in multiple orientations);
    - North is oriented to within 45 degrees of true north, including 45 degrees east of north;
    - East is oriented to within 45 degrees of true east, including 45 degrees south of east;
    - South is oriented to within 45 degrees of true south, including 45 degrees west of south;
    - West is oriented to within 45 degrees of true west, including 45 degrees north of west.
5. CA City: Legal city/town of property.
6. Number of Altered Dwelling Units: 1 for single-family, 1 or more for multifamily.
7. Zip Code: 5-digit zip code for the project location (used to determine climate zone).
8. Fuel Type: Natural Gas, Liquefied Propane Gas, or Electricity.

    NOTE: Prescriptive compliance only allows electricity if natural gas is not connected to the building, or if the conditions of Section 150.2(b)1Hiiie are met. See instruction at section H for more information.

9. Climate Zone: From Joint Appendix JA2.1.1.
10. Total Conditioned Floor Area: Enter the new conditioned floor area in ft^2, as measured from the outside of exterior walls of the dwelling unit or building being altered.
11. Building Type: Single Family (includes duplex), or Multi-Family (a building that shares common walls and common floors or ceilings).
12. Slab Area: Area of the first floor slab (if any) in ft^2.
13. Project Scope: Insulation, Roof Replacement, Fenestration/Glazing, Heating System, Cooling System, Duct System, and/or Water Heating System alteration.

B. Fenestration/Glazing Allowed Areas and Efficiencies

The Alteration and Fenestration Type will affect how the standards apply and whether the fenestration area is limited. Percentages are determined as Conditioned Floor Area x 0.20 = total ft^2 of fenestration allowed (20%). Depending on the climate zone, if west-facing fenestration is limited (in climate zones 2, 4, 6-15), it is limited to a maximum of 5%. The overall total fenestration area is limited to 20%, not 25%. Fenestration areas are expressed in square feet, not square inches.

1. Alteration Type: Indicate the type of fenestration alteration - adding fenestration/glazing, replacing fenestration/glazing, adding fenestration/glazing ≤ 75 ft^2 windows, replacing fenestration/glazing ≤ 75 ft^2 window, adding fenestration/glazing ≤ 16 ft^2 skylight and or replacing fenestration/glazing skylights
2. Maximum Allowed Fenestration Area for All Orientations (ft^2): The maximum allowed fenestration area is 20%. Depending on the type of fenestration and the alteration type, this field may have values such as 75 ft^2 or 16 ft^2.
3. Maximum Allowed West-Facing Fenestration Area Only: The Maximum Allowed West-Facing Fenestration Area is 5% of the conditioned floor area (used in climate zones 2, 4, and 6-15).

   NOTE: (1) If adding fenestration/glazing ≤ 16 ft^2 skylight, enter NA
   (2) West includes any vertical fenestration oriented to within 45 degrees of true west, including 45 degrees south of west. For skylights, west also includes any skylight area facing any direction with a pitch of less than 1:12

4. Existing Fenestration Area for All Orientations: Enter the area, in square feet, of the existing fenestration/glazing.
   Existing West-Facing Fenestration Area: Enter the area, in square feet, of the existing west-facing fenestration/glazing. If project has no existing west-facing fenestration then enter "0".
5. Maximum Allowed U-factor: Maximum U-factor from Table 150.1-A, Package A. This field will almost always be 0.30 unless the U-factor will be the area weighted average, CF1R-ENV-02-E, with other higher fenestration windows. For skylights this will be 0.55.

   NOTE: (1) If meeting Exception 2 to Section 150.2(b)1A (adding ≤ 16 ft^2 skylights), enter 0.55.
   (2) If meeting Exception 1 to Section 150.2(b)1B (replacing ≤ 75 ft^2 windows), enter 0.40.
   (3) If meeting Exception 2 to Section 150.2(b)1B (replacing skylights), enter 0.55.

6. Maximum Allowed SHGC: Maximum SHGC from Table 150.1-A or Table 150.1-B. This field will almost always be either 0.23 or N/A, depending on climate zone. N/A means there is no maximum SHGC required in this climate zone. The SHGC will be the area weighted average, CF1R-ENV-02-E, with other higher fenestration windows. For skylights this will be 0.30.

   NOTE: (1) If meeting Exception 2 to Section 150.2(b)1A (adding ≤ 16 ft^2 skylights), enter 0.30.
   (2) If meeting Exception 1 to Section 150.2(b)1B (replacing ≤ 75 ft^2 windows), enter 0.35.
   (3) If meeting Exception 2 to Section 150.2(b)1B (replacing skylights), enter 0.30.

7. Comments: Note any special location or comment here.

C. Fenestration/Glazing Proposed Areas and Efficiencies - Add (Section 150.2(b)1A)

1. Tag/ID: A label (if any) from the plans, such as W1.
2. Fenestration Type: Indicate the type of fenestration construction e.g., Fixed Window, Operable Window, or Skylight.

   NOTE: Doors with glazing are counted in one of two ways. A door with 25% or more glazing is considered a glazed door and is counted as the entire door area. A door with less than 25% glazing can be counted as the entire door area or can be calculated as the actual glass area with a 2-inch (0.17 ft^2) frame all around.

3. Frame type: Metal, metal thermal break, or nonmetal.
4. Dynamic Glazing: Indicate if the fenestration has integrated shading device, chromogenic glazing or none for no dynamic glazing. Chromogenic glazing shall be considered separately from other fenestration types.

5. Orientation (North, East, South, West): The definitions in the Energy Efficiency Standards include these specific details -
   - North is oriented to within 45 degrees of true north, including 45 degrees east of north;
   - East is oriented to within 45 degrees of true east, including 45 degrees south of east;
   - South is oriented to within 45 degrees of true south, including 45 degrees west of south;
   - West is oriented to within 45 degrees of true west, including 45 degrees north of west.

   NOTE: Skylights in a roof pitch greater than 1:12 can be included as facing the same orientation as that portion of the roof angle. If the skylight is in a roof with a pitch less than 1:12, the skylight is assumed to face west.

6. Number of Panes: Indicate the number of panes for each Tag/ID; is it single, double, or triple pane window?
7. Proposed Fenestration Area (ft^2): Indicate the area (in square feet) of each exterior fenestration type, excluding west-facing fenestration.
8. Proposed West Facing Fenestration Area (ft^2): In climate zones 2, 4, 6-15, indicate the area (in square feet) of each exterior west-facing fenestration type separately.
9. Proposed U-factor: Enter (a) the NFRC U-factor based on the proposed brand and type of fenestration using National Fenestration Rating Council (www.nfrc.org) certified values, (b) the default value from Table 110.6-A or Equation NA6-1, or (c) the weighted average U-factor calculated on form CF1R-ENV-02-E.

   For the exceptions, up to 3 ft^2 of tubular skylights and up to 3 ft^2 of glazing in a door enter N/A, and for up to 16 ft^2 of skylight, enter 0.55. If any products (other than the exceptions) have a higher U-factor than 0.32, first complete a form CF1R-ENV-02 to calculate the area-weighted average U-factor and attach it to this CF1R.

   NOTE: Dynamic glazing is a glazing system that changes its performance U-factor and SHGC based on the physical environment. Dynamic glazing includes chromogenic glazing or integrated shading systems (this does not include internally or externally mounted shading devices). If using dynamic glazing, use the lowest tested U-factor and SHGC in Columns 9 and 11.

10. Proposed U-factor Source: NFRC, Table 110.6-A, Equations NA6-1, or Area-Weighted Average Worksheet (ENV-02). The source of the U-factor data for the fenestration product.
11. Proposed SHGC: In climate zones 2, 4, 6-15 enter the SHGC from (a) NFRC-rated certification information, or (b) default value from Table 110.6-B or Equation NA6-2, or (c) the weighted average SHGC calculated on form CF1R-ENV-02.

    For the exceptions – up to 3ft^2 of tubular skylights and up to 3ft^2 of glazing in a door, enter N/A; up to 16ft^2 of skylight, enter 0.30. If any products (other than the exceptions) have a higher SHGC than required by Table 150.1-A or Table 1501.-B, first complete a form CF1R-ENV-02 to calculate the area-weighted average SHGC and attach it to this CF1R.

12. Proposed SHGC Source: NFRC, Table 110.6-A, Equations NA6-1, or Area-Weighted Average Worksheet (ENV-02). The source of the U-factor data for the fenestration product.
13. Exterior Shading Device: If exterior shading devices are used to meet the SHGC requirement, indicate the type of device (from Table S-1 of CF1R-ENV-03 Solar Heat Gain Coefficient Worksheet) and attach an ENV-03.

    NOTES:
    (1) An exterior shading device is not used for products with an NFRC rated U-factor and SHGC; based on a factory integrated shading device.
    (2) If using an overhang for south-facing glazing, the glazing must be fully shaded at solar noon on August 21 and substantially exposed to direct sunlight at solar noon on December 21 (see Residential Manual, Section 3.3.6.3).

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14. Combined SHGC from CF1R-ENV-03: If exterior shading devices are combined with the SHGC value of the fenestration to meet the prescriptive SHGC requirements (as indicated by a value in column E. 13), indicate the SHGC calculated on form CF1R-ENV-03 and attach the form for each window with an exterior shading device.

To determine compliance with allowable fenestrations areas and efficiencies, complete rows 15-32.

15. Total Proposed Fenestration Area: Enter the sum of the existing (D04a) and proposed fenestration areas for all orientations (E07 + E08). For project scopes: Add Fenestration/Glazing ≤ 75 ft^2 and/or Add Fenestration/Glazing ≤ 16 ft^2, enter NA.
16. Maximum Allowed Fenestration Area: Enter the maximum allowed fenestration area for all orientations, from D02.
17. Is the Total Proposed Fenestration Area ≤ the Maximum Allowed Fenestration Area: Indicate Yes if the Total Proposed Fenestration Area is less than or equal to the Maximum Allowed Fenestration Area. If No, the project fails prescriptive compliance – specified fenestration areas must be reduced, or compliance may be attempted using the performance approach.

    NOTE: If Total Proposed Fenestration Area equals NA, Design Complies - Indicate Yes.

18. Total Proposed West-Facing Fenestration Area: Enter the sum of the existing (D04b) and proposed west-facing fenestration areas (E08). For project scopes: Add Fenestration/Glazing ≤ 75 ft^2 and/or Add Fenestration/Glazing ≤ 16 ft^2, enter NA.
19. Maximum Allowed West-Facing Fenestration Area: Enter the maximum allowed west-facing fenestration area only, from D03.
20. Is the Total Proposed Fenestration Area ≤ the Maximum Allowed West-Facing Fenestration Area: Indicate Yes if the Total Proposed West-Facing Fenestration Area is less than or equal to the Maximum Allowed West-Facing Fenestration Area. If No, the project fails prescriptive compliance – specified west-facing fenestration areas must be reduced, or compliance may be attempted using the performance approach.

    NOTE: If Total Proposed West-Facing Fenestration Area equals NA, Design Complies - Indicate Yes.

21. Proposed Fenestration U-factor (Windows): If necessary, report the area-weighted average U-factor from the completed CF1R-ENV-02. Otherwise, report the single largest associated value from column E09.
22. Required Fenestration U-factor (Windows): Enter the Maximum Allowed U-factor (D05a).
23. Is the Proposed Fenestration U-factor ≤ the Required Fenestration U-factor: Indicate Yes if the Proposed Fenestration U-factor is less than or equal to the Required Fenestration U-factor. If No, the project fails prescriptive compliance – specified fenestration U-factor must be reduced, or compliance may be attempted using the performance approach.
24. Proposed Fenestration SHGC (Windows): If necessary, report the area-weighted average SHGC from the completed CF1R-ENV-02. Otherwise, report the single largest associated value from column E11 or E14.
25. Required Fenestration SHGC (Windows): Enter the Maximum Allowed SHGC (D06a).
26. Is the Proposed Fenestration SHGC ≤ the Required Fenestration SHGC: Indicate Yes if the Proposed Fenestration SHGC is less than or equal to the Required Fenestration SHGC. If No, the project fails prescriptive compliance – specified fenestration SHGC must be reduced, or compliance may be attempted using the performance approach.
27. Proposed Fenestration U-factor (Skylights): If necessary, report the area-weighted average U-factor from the completed CF1R-ENV-02. Otherwise, report the single largest associated value from column E09.
28. Required Fenestration U-factor (Skylights): Enter the Maximum Allowed U-factor (D05b).
29. Is the Proposed Fenestration U-factor ≤ the Required Fenestration U-factor: Indicate Yes if the Proposed Fenestration U-factor is less than or equal to the Required Fenestration U-factor. If No, the project fails prescriptive compliance – specified fenestration U-factor must be reduced, or compliance may be attempted using the performance approach.
30. Proposed Fenestration SHGC (Skylights): If necessary, report the area-weighted average SHGC from the completed CF1R-ENV-02. Otherwise, report the single largest associated value from column E11 or E14.
31. Required Fenestration SHGC (Skylights): Enter the Maximum Allowed SHGC (D06b).
32. Is the Proposed Fenestration SHGC ≤ the Required Fenestration SHGC: Indicate Yes if the Proposed Fenestration SHGC is less than or equal to the Required Fenestration SHGC. If No, the project fails prescriptive compliance – specified fenestration SHGC must be reduced, or compliance may be attempted using the performance approach.

D. Fenestration/Glazing Proposed Areas and Efficiencies – Replace (Section 150.2(b)1B)

1. Tag/ID: A label (if any) from the plans, such as W1.
2. Fenestration Type: Indicate the type of fenestration construction e.g., Fixed Window, Operable Window, or Skylight.

   NOTE: Doors with glazing are counted in one of two ways. A door with 25% or more glazing is considered a glazed door and is counted as the entire door area. A door with less than 25% glazing can be counted as the entire door area or can be calculated as the actual glass area with a 2-inch (0.17 ft^2) frame all around.

3. Frame Type: Metal, metal thermal break, or nonmetal.
4. Dynamic Glazing: Indicate if the fenestration has integrated shading device, chromogenic glazing or none for no dynamic Glazing.

   NOTE: Chromogenic glazing shall be considered separately from other fenestration types.

5. Orientation (North, East, South, West): The definitions in the Energy Efficiency Standards include these specific details -
   - North is oriented to within 45 degrees of true north, including 45 degrees east of north;
   - East is oriented to within 45 degrees of true east, including 45 degrees south of east;
   - South is oriented to within 45 degrees of true south, including 45 degrees west of south;
   - West is oriented to within 45 degrees of true west, including 45 degrees north of west.

   NOTE: Skylights in a roof pitch greater than 1:12 can be included as facing the same orientation as that portion of the roof angle. If the skylight is in a roof with a pitch less than 1:12, the skylight is assumed to face west.

6. Area Removed (ft^2): Enter the area, in square feet, of the fenestration/glazing being removed.
7. Area Added (ft^2): Enter the area, in square feet, of the fenestration/glazing being added.
8. Net Added Area (ft^2): The difference between the Area Added and the Area Removed.
9. Proposed U-factor: Enter (a) the NFRC U-factor based on the proposed brand and type of fenestration using National Fenestration Rating Council (www.nfrc.org) certified values, (b) the default value from Table 110.6-A, (c) Equation NA6-1, or (d) the area-weighted average U-factor calculated on form CF1R-ENV-02-E, Area-Weighted Average Calculation Worksheet.

   For the exceptions, up to 3 ft^2 of tubular skylights and up to 3 ft^2 of glazing in a door enter N/A, and for up to 16 ft^2 of skylight, enter 0.55. If any products (other than the exceptions) have a higher U-factor than 0.30, first complete an ENV-02 to calculate a weighted average U-factor and attach it to this CF1R.

   NOTE: Dynamic glazing is a glazing system that changes its performance U-factor and SHGC based on the physical environment. Dynamic glazing includes chromogenic glazing or integrated shading systems (this does not include internally or externally mounted shading devices). If using dynamic glazing, use the lowest tested U-factor and SHGC in Columns 9 and 11.

10. Proposed U-factor Source: NFRC, Table 110.6-A, Equations NA6-1, or Area-Weighted Average Worksheet (ENV-02). The source of the U-factor data for the fenestration product.
11. Proposed SHGC: In climate zones 2, 4, 6-15 enter the SHGC from (a) NFRC-rated certification information, (b) default value from Table 110.6-B, (c) Equation NA6-2, or (d) the weighted average SHGC calculated on form CF1R-ENV-02.

    For the exceptions – up to 3ft^2 of tubular skylights and up to 3ft^2 of glazing in a door, enter N/A; up to 16ft^2 of skylight, enter 0.30. If any products (other than the exceptions) have a higher SHGC than required by Table 150.1-A or Table 150.1-B, first complete a form CF1R-ENV-02 to calculate the area-weighted average SHGC and attach it to this CF1R.

12. Proposed SHGC Source: NFRC, Table 110.6-B, Equations NA6-2, or Area-Weighted Average Worksheet (ENV-02). The source of the SHGC data for the fenestration product.
13. Exterior Shading Device: If exterior shading devices are used to meet the SHGC requirement, indicate the type of device (from Table S-1 of CF1R-ENV-03 Solar Heat Gain Coefficient Worksheet) and attach an ENV-03.

    NOTES: (1)An exterior shading device is not used for products with an NFRC rated U-factor and SHGC; based on a factory integrated shading device.

(2)If using an overhang for south-facing glazing, the glazing must be fully shaded at solar noon on August 21 and substantially exposed to direct sunlight at solar noon on December 21 (see Residential Manual, Section 3.5.5).

14. Combined SHGC from CF1R-ENV-03: If exterior shading devices are combined with the SHGC value of the fenestration to meet the prescriptive SHGC requirements (as indicated by a value in column F. 13), indicate the SHGC calculated on form CF-1R-ENV-03 and attach the form for each window with an exterior shading device.

To determine compliance with allowable fenestration areas, complete rows 15-30.

15. Net Added West-facing Fenestration Area: If limited, enter the total amount of west-facing fenestration ONLY that will be added to the dwelling unit when alterations are complete.
16. Is Net Added Fenestration Area ≤ 0 for west-facing fenestration? Indicate Yes or No. If No, the project fails prescriptive compliance – specified west-facing fenestration areas must be reduced, or compliance may be attempted using the performance approach.
17. Net Added Fenestration Area (all orientations): This field is to show the net area of added fenestration for all orientations.
18. Is Net Added Fenestration Area ≤ 0 for all orientations? Indicate Yes or No. If No, the project fails prescriptive compliance – specified fenestration areas must be reduced, or compliance may be attempted using the performance approach.
19. Proposed Fenestration U-factor (Windows): If necessary, enter the area-weighted average U-factor from the completed CF1R-ENV-02. Otherwise, report the single largest associated value from F09.
20. Required Fenestration U-factor (Windows): From Section D., report the value of column 05a.
21. Is the Proposed Fenestration U-factor ≤ the Required Fenestration SHGC? Indicate Yes or No. If No, the project fails prescriptive compliance – specified fenestration U-factor must be reduced, or compliance may be attempted using the performance approach.
22. Proposed Fenestration SHGC (Windows): If necessary, enter the area-weighted average SHGC from the complete CF1R-ENV-02. Otherwise, report the single largest associated value from columns F11 or F14.
23. Required Fenestration SHGC (Windows): From Section D., report the value of column 06a.
24. Is the Proposed Fenestration SHGC ≤ the Required Fenestration SHGC? Indicate Yes or No. If No, the project fails prescriptive compliance – specified fenestration SHGC must be reduced, or compliance may be attempted using the performance approach.
25. Proposed Fenestration U-factor (Skylights): If necessary, enter the area-weighted average U-factor from the completed CF1R-ENV-02. Otherwise, report the single largest associated value from F09.
26. Required Fenestration U-factor (Skylights): From Section D., report the value of column 05b.
27. Is the Proposed Fenestration U-factor ≤ the Required Fenestration U-factor? Indicate Yes or No. If No, the project fails prescriptive compliance – specified fenestration U-factors must be reduced, or compliance may be attempted using the performance approach.
28. Proposed Fenestration SHGC (Skylights): If necessary, enter the area-weighted average SHGC from the completed CF1R-ENV-02. Otherwise, report the single largest associated value from columns F11 or F14.
29. Required Fenestration SHGC (Skylights): From Section D., report the value of column 06b.
30. Is the Proposed Fenestration SHGC ≤ the Required Fenestration SHGC? Indicate Yes or No. If No, the project fails prescriptive compliance – specified fenestration SHGC must be reduced, or compliance may be attempted using the performance approach.

Documentation Declaration Statements

1. The person who prepared the CF1R will sign and complete the fields for their name, company (if applicable), address, phone number, certification information (if applicable), date and signature.
2. The person who is assuming responsibility for the project being built to comply with Title 24, Part 6, will complete the fields for their name, company (if applicable), address, phone number, license number (if applicable), date and signature.